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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,032	03/18/2004	Brig Barnum Elliott	03-4056	5605

7590 11/15/2005

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EXAMINER

FIGUEROA, MARISOL

ART UNIT	PAPER NUMBER
2681	

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/803,032

Applicant(s)

ELLIOTT, BRIG BARNUM

Examiner

Marisol Figueroa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-11, 13-15, 17-19, 21-33 is/are rejected.
- 7) ☒ Claim(s) 4, 12, 16 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1, 5, 9, and 33** are rejected under 35 U.S.C. 102(b) as being anticipated by **Farris et al. US 5,751,789**.

Regarding claim 1, Farris discloses a device (Smart Network Interface Device SNID or wireless-to-landline interface) for enabling network connectivity with a service provider, the device comprising:

a wireless transceiver (Figure 2, cellular transceiver 51);

an antenna coupled to the wireless transceiver (Figure 2, antenna 25); and

a switch coupled to the wireless transceiver and to a wireline network (Figure 2; col.2, lines 32-35; col.8, lines 7-9; switch 45), the switch exchanging data with the network service provider over the wireline network during normal operation and exchanging data with the network service provider via the wireless transceiver when the connectivity is lost on the wireline network (col.3, lines 9-45; col.6, lines 31-51; col.8, lines 54-62; the switch has two latched states, normal line-connected state (1) in which the switch is connected to the

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active twisted pair of the customer premises and changes to a second state (2) in where the active twisted pair is connected to the land-line-to-cellular interface, the switch is connects the active twisted pair to the land-line interface when a fault is detected to exchange information with the local serving mobile telephone switching office (MTSO) of a wireless communication network).

Regarding claim 5, Farris discloses the device of claim 1, wherein the device is physically located at a location of a subscriber of the network service provider (col.4, lines 18-21).

Regarding claim 9, Farris discloses the device of claim 1, wherein the switch monitors a failed connection state of the wireline network for renewed connectivity of the wireline network and resumes communication over the wireline network when the wireline connection is renewed (col.10, lines 41-56).

Regarding claim 33, Farris discloses a device comprising (Figure 2; smart network interface device SNID):

means for establishing connectivity to a network service provider over a wireline connection (Abstract, lines 1-3; col.2, lines 42-45, 63-66; the wireless-to-landline interface or SNID connects to a telephone line service of a landline network);

means for monitoring the wireline connection for failure (col.2, lines 42-45; col.3, lines 9-13; Line Fault Detector); and

means for automatically establishing a connection to the network service provider over a wireless connection when the wireline connection fails (col.3, lines 9-45; when the detector detects a fault, automatically notifies the controller of the fault and the controller activates the switch to connect to the wireless-to-landline interface to exchange information with the local serving mobile telephone switching office (MTSO) via wireless transmission).

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3. **Claims 18, and 23-26** are rejected under 35 U.S.C. 102(e) as being anticipated by **Cardina et al. US 2004/0214569 A1**.

Regarding claim 18, Cardina discloses a method for providing fallback network connectivity to a network service provider comprising:

providing primary network connectivity over a wireline connection (Figure 1; P.0058, lines 1-4; landline connection 101 between the customers premises equipment 106 and the public switched telephone network (PSTN) 108 of the landline network); and providing backup network connectivity via a wireless network implemented over a plurality of network nodes located at residences of subscribers of the network service provider (P.0009; P.0059; the backup devices communicates through the MTSO that interfaces with the PSTN when there is interruption of the landline telephone service interruption).

Regarding claim 23, Cardina discloses the method of claim 18, wherein providing the backup network connection includes authorizing the subscriber of the network with the network service provider (P.0011-0012; the backup device sends a message to register with the mobile telephone switching office to forward communication through the wireless network; note that registration involves authorization from the network to be allowed to use the network).

Regarding claim 24, Cardina discloses the method of claim 18, further comprising: providing the backup network connectivity in response to a failed connection state of the wireline connection (P.0011, lines 1-8).

Regarding claim 25, Cardina discloses the method of claim 24, further comprising: monitoring failed connection state of the wireline connection for renewed connectivity of

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the wireline connection; and disconnecting from the backup network connectivity when the wireline connection is renewed (P.0015, lines 1-6).

Regarding claim 26, Cardina discloses the method of claim 18, wherein the network service provider provides Internet connectivity or telephony services (Figure 1, the network service provider is a Public Switched Telephone Network (PSTN)).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 2 and 3** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Farris et al.** in view of **Minarczik et al. US 5,790,631**.

Regarding claims 2 and 3, Farris discloses the device of claim 1, but fails to disclose wherein the wireless transceiver is configured to relay data from other wireless transceivers that have lost connectivity to the wireline network and wherein the wireless transceiver relays the data from the other wireless transceivers that have lost connectivity by forwarding data units received from the other wireless transceivers through the switch and to the wireline network. Minarczik discloses a method in which a wireless transceiver connects to a telephone line network terminal, in place of a disabled drop cable (abstract, lines 1-2); as shown in figure 2, a temporary repair is made using wireless transceivers. A wireless transceiver is positioned in the customer premises of the disabled drop cable which

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communicates with a wireless transceiver positioned in the customer premises of a subscriber with an enabled telephone line connection, this permit a person at the premises of a disable cable to make and receive calls using the standard telephone station equipment (col.6, lines 5-17, 34-42, 52-59). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for the wireless transceiver be configured to relay data from other wireless transceiver that have lost connectivity to the wireline network as suggested by Minarczik, in order to provide wireline service to the wireless transceiver that have lost connectivity with the wireline network.

6. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Farris et al.** in view of well known Prior Art (MPEP 2144.05).

Regarding claim 6, Farris discloses the device of claim 1, and further teaches that a variety of wireless transceivers could be used (col.7, lines 13-23), however fails to specifically teach wherein the wireless transceiver operates in accordance with IEEE 802.11 standards. The Examiner takes official notice of the fact that is notoriously well known in the art that the IEEE 802.11 standard is a wireless network technology. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to include a wireless transceiver in accordance with IEEE 802.11 standards in Farris invention since is one of a variety of wireless transceivers used to create wireless local area networks and Farris invention will perform equally well as with using a cellular transceiver or other wireless transceiver.

7. **Claim 7** rejected under 35 U.S.C. 103(a) as being unpatentable over **Farris et al.** in view of **Ehreth US 6,246,750 B1**.

Regarding claim 7, Farris discloses the device of claim 1, but fails to disclose wherein the wireline network includes a fiber network. Ehreth teaches that telecommunication systems using fiber optic cable transmit communication signals are becoming increasingly prevalent due to the enormous advantages that fiber-optic technology provides (col.1, lines 25-31). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for a wireline network to include a fiber network as suggested by Ehreth, because telecommunication system using fiber optic cables have enormous advantages over copper-wire based systems such as larger bandwidth and improved signal quality.

8. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Farris et al.** in view of **McKenna et al. US 6,829,486 B2**.

Regarding claim 8, Farris discloses the device of claim 1, but fails to disclose wherein the wireline network includes coaxial cables. McKenna teaches that wirelined-based communications networks such as traditional telephone systems, Local Area Networks, and the like, can use a variety of physical media to interconnect wired subscribers devices to the wirelined-based communication network and these include: twisted pair, Ethernet, coaxial cable, fiber optic cable, DSL on twisted pair, 4-wire, and the like (col.9, lines 31-59). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to include coaxial cables in a wireline network as taught by McKenna, because coaxial cables is one of the variety of physical media used to interconnect subscribers in a wirelined-based communication network.

9. **Claims 10, 13, 14, 15, 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Cardina et al. US 2004/0214569 A1 in view of **Datta US 2005/0108427 A1**.

Regarding claim 10, Cardina discloses a method performed by a network subscriber comprising: establishing connectivity to a network service provider over a wireline connection (P.0038, lines 1-9; note that when there is no interruptions in the subscriber's landline, i.e. wireline, connection there is a direct connection with the network service provider over the landline connection); monitoring the wireline connection for failure (P.0038, lines 1-9; the backup device detects service interruptions in the subscriber's landline, thus it is inherent the landline connection is monitored); and automatically establishing a connection to the network service provider over a wireless connection (P.0069-0071; Figure 1; the backup device 102, e.g. wireless device, provides wireless communication service through the Mobile Telephone Switching Office which is connected to the Public Switched Telephone Network). Cardina fails to disclose wherein the wireless connection is relayed via one or more other subscribers when the wireline connection fails. Datta teaches methods and apparatus for relaying data in a peer-to-peer network to relay messages to wireless devices to which wireless devices does not have a direct wireless connection (Abstract; P.0014). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to relay the wireless connection via one or more subscribers as suggested by Datta, in order to relay the wireless connection to devices that does not have a direct wireless connection.

Regarding claim 13, the combination of Cardina and Datta discloses the method of claim 10, Datta further discloses wherein the wireless connection is formed in accordance with IEEE 802.11 standards (P.0003, lines 1-12). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to form a wireless connection

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in accordance with IEEE 802.11 standards as suggested by Datta, because wireless connections can be made using interface supporting an IEEE 802.11.

Regarding claim 14, Cardina discloses the method of claim 10, wherein automatically establishing a connection to the network service provider includes wirelessly broadcasting a message requesting a relay to the network service provider by the one or more other network subscribers (P.0011-0012; the backup devices send a message to register with the mobile telephone switching office to forward communication through the wireless network).

Regarding claim 15, Cardina discloses the method of claim 14, wherein automatically establishing a connection to the network service provider further includes authorizing the subscriber to use the network (P.0011-0012; the backup device sends a message to register with the mobile telephone switching office to forward communication through the wireless network; note that registration involves authorization from the network to be allowed to use the network).

Regarding claim 17, Cardina discloses the method of claim 10, further comprising: monitoring a failed connection state of the wireline connection for renewed connectivity of the wireline connection; and disconnecting from the wireless connection when the wireless connection is renewed (P.0015, lines 1-6).

10. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Cardina et al.** in view of in view of **Patron et al.** US 2005/0063333 A1.

Regarding claim 11, Cardina discloses the method of claim 10, wherein the wireless connection establishes an ad-hoc network via a plurality of network units. Cardina discloses that a large number of backup devices, e.g. wireless devices, are supported (P.0009, lines 1-4) that inherently are wireless transceivers. Patron teaches that Ad-hoc networks usually consist

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of several computing devices each equipped with a wireless transceiver (P.0001). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to recognize that an ad-hoc network may form between the plurality of backup devices as taught by Patron, because Ad-hoc networks usually consists of devices comprising wireless transceivers and each backup device is a wireless transceiver.

11. **Claim 19** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Cardina et al.** in view of Ad-Hoc network definition (What is.com).

Regarding claim 19, Cardina discloses the method of claim 18, but fails to disclose wherein the wireless network includes an ad-hoc network. The wireless backup device communicates wirelessly with the network for the time the landline service is interrupted; therefore since it is temporary it forms an ad-hoc network with the service provider. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to recognize that an ad-hoc network is created with between the backup device and the service provider when the landline fails, because an ad-hoc is a temporary wireless connection.

12. **Claim 21** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Cardina et al.** in view of **Datta US 2005/0108427 A1**.

Regarding claim 21, Cardina discloses the method of claim 18, but fails to disclose the step of providing the backup network connectivity by relaying data to a first node in the wireless network that has an active wireline connection to the network service provider. Datta teaches methods and apparatus for relaying data in a peer-to-peer network to relay messages to wireless devices to which wireless devices does not have a direct wireless connection (Abstract; P.0014). Therefore, it would have been obvious to one having

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ordinary skill in the art at the time of the invention to relay the wireless connection via one or more subscribers as suggested by Datta, in order to relay the wireless connection to devices that does not have a direct wireless connection and provide wireline service through the relay service.

13. **Claim 22** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Cardina et al.** in view of well known Prior Art (MPEP 2144.05).

Regarding claim 22, Cardina discloses the method of claim 18, but fails to teach wherein the wireless network is formed in accordance with IEEE 802.11 wireless connectivity standards. The Examiner takes official notice of the fact that is notoriously well known in the art that the IEEE 802.11 standard is a wireless network technology. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to form a wireless network in accordance with IEEE 802.11 standards in Cardina's invention since is one of a variety of wireless networks available to create wireless local area networks and more cost effective compared to other wireless networks.

14. **Claim 27** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Cardina et al.** in view of **McKenna et al. US 6,829,486 B2**.

Regarding claim 27, Farris discloses the method of claim 18, but fails to disclose wherein the wireline network includes a fiber connection or a coaxial connection leading to a subscriber of the network service provider. McKenna teaches that wirelined-based communications networks such as traditional telephone systems, Local Area Networks, and the like, can use a variety of physical media to interconnect wired subscribers devices to the wirelined-based communication network and these include: twisted pair, Ethernet, coaxial cable, fiber optic cable, DSL on twisted pair, 4-wire, and the like (col.9, lines 31-59).

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Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to include a fiber connection or coaxial connection in a wireline network as taught by McKenna, because fiber and coaxial cables are one of the variety of physical media used to interconnect subscribers in a wirelined-based communication network.

15. **Claims 28 and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Farris et al.**

Regarding claim 28, Farris discloses a network comprising: wireline connections to a plurality of subscribers (note that it is conventional to provide wireline connections of telephone services to a plurality of subscribers); network interface units (NIUs) located at the plurality of subscribers (col.2, lines 40-45; col.4, lines 18-21; note that if there is a plurality of subscribers each will contain a network interface unit, i.e. SNID), the NIUs each including: a wireless transceiver (col.4, lines 26-28; Figure 2; cellular transceiver 51); and a switch coupled to the wireless transceiver and to one of the wireline connections (Figure 2; col.2, lines 32-35; col.8, lines 7-9; switch 45), the switch providing data from one of the wireline connections to a corresponding subscriber of the network during normal operation of the one of the wireline connections and the switch providing data from the wireless transceiver to the corresponding subscriber of the network when connectivity on the one of the wireline connections fail (col.3, lines 9-45; col.6, lines 31-51; col.8, lines 54-62; the switch has two latched states, normal line-connected state (1) in which the switch is connected to the active twisted pair of the customer premises and changes to a second state (2) in where the active twisted pair is connected to the land-line-to-cellular interface, the switch is connects the active twisted pair to the land-line interface when a fault is detected to exchange information with the local serving mobile telephone switching office (MTSO) of a wireless communication network). Farris fails to disclose wherein the wireless transceivers are

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configured to communicate with other NIUs. However, it is well known that wireless transceivers can communicate with each other, therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to recognize that the network interfaces NIUs of different subscribers communicate with each other since it is well known that wireless transceivers are configured to exchange data.

Regarding claim 30, Farris discloses the method of claim 28, wherein the NIUs each additionally include an antenna coupled to the wireless transceiver (Figure 2, antenna 25).

16. **Claim 29** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Farris et al.** in view of **Patron et al.**

Regarding claim 29, Farris discloses the method of claim 28, but fails to disclose wherein the NIUs form an ad-hoc network. Patron teaches that Ad-hoc networks usually consist of several computing devices each equipped with a wireless transceiver (P.0001). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to recognize that an ad-hoc network forms between the plurality of NIUs as taught by Patron, because Ad-hoc networks usually consist of devices comprising wireless transceivers and each NIU comprises a wireless transceiver.

17. **Claims 31 and 32** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Farris et al.** in view of **Patron et al.**, and further in view of **Datta**.

Regarding claims 31 and 32, Farris discloses the method of claim 28, wherein the wireless transceiver is configured to relay data from other wireless transceivers that have lost connectivity with the wireline connections and wherein the wireless transceiver relays the data from the other wireless transceivers that have lost connectivity by forwarding data units

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received from the other wireless transceivers through the switch and to the wireline network. Datta teaches methods and apparatus for relaying data in a peer-to-peer network to relay messages to wireless devices to which wireless devices does not have a direct wireless connection (Abstract; P.0014). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to relay the wireless connection via one or more subscribers as suggested by Datta, in order to relay the wireless connection to devices that does not have a direct wireless connection and provide wireline service through the relay service.

Allowable Subject Matter

18. **Claims 4, 12, 16, and 20** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marisol Figueroa whose telephone number is (571) 272-7840. The examiner can normally be reached on Monday Thru Friday 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Mari Sol Figueroa
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